BREAKOUT SESSION - GROUP 1 SUMMARY

Moderator: Ira Rubenstein - Environmental Business Association
Rapporteur: Ann Reisman - Brookhaven National Laboratory

• Mr. Eric H Bauman	Electric Power Research Institute (EPRI)
• Mr. A. Christopher Gross	KeySpan Energy
• Mr. Armen Nishanian	Consolidated Edison Company of New York, Inc.
• Ms. Janet Joseph	New York State Energy Research and Development Authority (NYSERDA)
• Ms. Meredith Laureno	New York City Dept. of Health & Mental Hygiene
• Mr. Michael J Calaban	New York State Department of Environmental Conservation (NYSDEC)
• Dr. Douglas Hill	Douglas Hill, P.E., P.C.
• Dr. Cynthia Rosenzweig	Columbia University

The participants concluded that energy-water nexus issues for southeastern New York were heavily influenced by

- a dense urban population in an older city with aging infrastructure
- deregulation of electricity
- lack of integrated planning among those responsible for water quality and quantity and those responsible for energy supply and demand

<u>Issues</u>

- The dense urban population setting in New York City and much of the Northeastern U.S. impacts energy-water issues
    - Power plant siting is difficult
        - Little land is available
        - NIMBY ('not in my back yard') concerns are intensified
        - Strict environmental regulations are in place
    - Wastewater treatment facility siting is difficult
        - Heavy storm drainage taxes water-treatment facilities
        - Dense population precludes easy solutions
        - Water quality of rivers providing water to New York City and surrounding Manhattan is affected by heavy nutrient loading
    - Human health depends on energy and water from outside New York City
    - Energy and water security are major issues
        - The water supply from surface waters and aging aqueducts is vulnerable and hard to protect
        - The electricity grid is susceptible to blackouts from outside causes
- The New York region relies on an aging infrastructure

    - Water distribution system is over a century old
        - There are major leaks in conduits to New York City
    - The steam district heating system is aging
        - Difficult to meter and charge
    - The region contains many energy-inefficient buildings
    - There is an outdated price structure for water and energy

- Electricity deregulation has hampered long-term electricity planning

    - Integrated long-term planning among distributors and generators of electricity is minimal
    - The present focus is on the short-term to intermediate-term planning horizon.
    - There is little incentive to plan with other stakeholders

- There is a lack of integrated planning for energy and water together

    - The assumption is that water will always be available for energy
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<u>Ideas proposed</u>:

- Work toward integrated energy-water planning

    - Promote networking among stakeholders
    - Institute a long-term planning program in New York
        - Include climate change
        - Pay explicit attention to energy-water interactions
    - Develop decision-making tools
    - Incorporate multi-state planning
        - e.g. the Great Lakes-Ten State Planning Commission

- Reduce demand for energy and water
    - Identify techniques to repair breaks in water conduits and steam pipes
    - Re-examine historical prices for water and energy to customers and adjust to encourage conservation
    - Develop incentives for using gray water in place of clean freshwater where possible
    - Encourage multiple sources for electricity production
        - Distributed generation
        - Cogeneration
        - Moving water in fresh water conduits

- Examine financial market incentives
    - Sarbanes-Oxley Act regarding liability and disclosure

    - Force examination of water and energy issues in the long term

- Identify regionally relevant pilot demonstrations
    - Use of gray water for power plant cooling
    - Advanced clean power generation
    - Cooling for power plants that protects fish